Ms. Marlene Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: NBP Public Notice #27, GN Docket No. 09-47,
GN Docket No. 09-51, GN Docket No. 09-137, CS Docket No. 97-80

Dear Ms. Dortch,

TiVo files these *ex parte* comments with respect to NBP Public Notice #27 and the above-referenced proceedings. Reply comments suggest that providing access to cable programming and associated guide metadata would, *inter alia,* result in "dismantling" the cable business model, jeopardize security of MVPD services, and exceed the Commission's statutory authority. TiVo disagrees strongly with each of these propositions, and believes the Commission should update its rules to provide consumers with a real choice of retail MVPD devices without further delay.

It is imperative that, on the eve of a National Broadband Plan, with the completion of the DTV Transition, and with the benefit of more than 17 years of experience, public notices, and public comment, the Commission now proceed expeditiously to address the key, unfinished business in achieving retail device competition for MVPD services. From TiVo's perspective, this includes finally achieving, in regulations, *assurances* that: (1) CableCARDS are supported by all operators as fully as the Commission has intended; (2) Switched Digital and future IP-delivered programming can be received by competitive retail devices via simple upstream signaling methods; and (3) competitive retail devices are provided with access to guide metadata to enable consumers to access cable content, on-demand content, Internet content, recorded content, and more, in a single device with a single, unified user interface.

The Commission Needs To Address "Switched Digital" Technologies Expeditiously.

More and more cable systems are implementing switched digital video technology ("SDV"). At the end of 2009, U.S. cable operators together deployed SDV in around 35 million homes compared to around 25 million at the end of 2008. Various industry sources predict that deployment of SDV may reach up to 90 million homes by the end of 2012.[1] It is reasonable to foresee that the majority of, if not all, video programming will be SDV in the not too distant

[1] Zacks Equity Research, "Switched Digital Video is Thriving" (February 9, 2010), http://finance.yahoo.com/news/Switched-Digital-Video-is-zacks-3934599275.html?x=0&.v=1.

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future.[2] In the absence of Commission action guaranteeing access by retail devices to switched digital programming channels, there will be absolutely no meaning to the FCC's rules implementing Section 629. The only way for competitive (*i.e.*, non-tru2way) retail devices to receive switched digital programming channels today is by use of a modified cable-supplied set-top box (known as a tuning adapter). Use of a cable-supplied set-top box to receive cable programming is the very antithesis of what a competitive set-top box policy is designed to achieve. This issue is so critical that without immediate FCC action, no market for competitive video devices can emerge – regardless of anything else the Commission does to advance competitive navigation devices.

In an open market, which the NCTA purports to favor, consumers can make choices as to the programming they wish to pay for and receive. If consumers are invited to pay for a programming package, but are denied access to programs in the package for which they pay, the market is neither open nor viable. Yet this is the "switched digital" scenario that the NCTA and cable operators have advocated that the Commission accept as fulfilling the mandate of Section 629 to assure a retail market for competitive navigation devices.[3] NCTA also criticizes CableCARDs, and the retail devices that they should support, as wasteful investments.[4] Yet NCTA would have the Commission adhere rigidly to a 2002 conception of a "one-way" device, rather than embrace secure and simple updates that would allow CableCARD-supported competitive products, such as TiVo DVRs, to continue to offer consumers convenient access to the programming for which they pay.

It is cable operators who have moved to the switched digital techniques that would deny consumers the right to make market-based decisions to acquire and view programming. Since this *change* in the terms under which cable programming was offered to CableCARD-reliant

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[2] Jeff Baumgartner, *Comcast Forges "Excalibur' for IPTV,* Light Reading (Oct. 28, 2009), http://www.lightreading.com/document.asp?doc_id=183740&site=cdn (describing Excalibur as an extension of the use of Comcast's existing IP platform to deliver IP video); Todd Spangler, *Assessing Cable's IPTV Future,* Multichannel News, Sept 25, 2009 ("There's now an expectation that cable providers will, at some point in the future, deliver all video services over IP."); Comments of Motorola, Inc. NBP Public Notice #27 (filed Dec. 22, 2009) ("IP is the next stage in the evolution of the cable network. Some subscription video providers already distribute some or all of their programming using IP-based technologies, and traditional cable operators are exploring moving in that direction as well.").

[3] *See, e.g.,* Time Warner Cable Opposition to Petition For Reconsideration or Clarification of TiVo Inc. at 24 (Aug. 11, 2009); Cox Communications, Inc. Opposition to Petition For Reconsideration at 13-16 (Aug. 11, 2009); *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming,* MB Docket No. 07-269, Further Reply Comments of The National Cable & Telecommunications Association at 13 (Aug. 28, 2009).

[4] NCTA Reply Comments at 25 & n.40. The cost of including a CableCARD slot is indeed one of the most expensive technology elements for navigation devices. At a time when set-top boxes with embedded security can be obtained for $35-50, the Commission should investigate the reason for this expense and why the price has not decreased given the millions of navigation devices using CableCARDs.

devices in 2003 was initiated by cable operators, they should not be averse to the adaptations that would allow the competitive device market to keep pace.[5] Doing so will not interfere with the manner in which switched channels are presented to the subscriber, as they are organized by the cable operator and programmers.

TiVo has proposed the use of broadband signaling, as in the "TV Everywhere" service being deployed by major cable operators, to provide upstream signaling to cable headends, so that owners of competitive retail cable devices can similarly signal upstream *to receive the programs for which they pay* without using an operator-supplied set-top box. The absence of the ability to make simple and secure upstream signaling requests threatens the viability of the only market for retail navigation devices that exists today.[6] The cable industry's response – that allowing users of DFAST-licensed, CableCARD-reliant devices such as TiVos to make such requests would be technically "incompatible" with their systems unless tru2way were deployed – is no less an evasion than was the Bell System's claim that competitive telephones would be, *ipso facto,* incompatible with system security.[7]

The simple technical fact is that TiVo retail DVRs are capable of receiving SDV programming if provided with an IP return path to the headend. The SDV equipment used by most digital cable operators is designed to accept IP-based signaling, which would allow TiVo devices to signal their request to view an SDV channel to the headend equipment. Indeed, where a cable operator has been open to working with TiVo on this approach, it has been accomplished *without* any such extraordinary reconfiguration of headend equipment.[8]

As the Commission has repeatedly recognized, the mandate of Section 629 is broad. It requires the Commission to assure the commercial availability of navigation devices – meaning that the Commission must persist in its efforts until commercial availability is

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[5] Requiring operators to provide SDV to retail devices that are technically capable of receiving them does not "freeze" cable innovation or preclude the use of SDV or other technology. TiVo encourages the use of IP-based transmission techniques. We simply need operator support for upstream signaling via IP.

[6] *See* Petition for Reconsideration or Clarification of TiVo Inc., File Nos. EB-07-SE-351, EB-SE-352 (July 27, 2009).

[7] *See, e.g.,* Time Warner Cable Opposition to Petition For Reconsideration or Clarification of TiVo Inc. at 24 (Aug. 11, 2009).

[8] Jeff Baumgartner, *RCN Makes TiVo Its Dominant DVR*, Light Reading (Aug. 4, 2009), http://www.lightreading.com/document.asp?doc_id=180071&site=cdn. ("Earlier this year, SeaChange and TiVo forged a deal that would allow one-way TiVo DVRs with CableCARD slots to run cable VoD applications *without* supporting the CableLabs -specified tru2way platform. **Instead, the Internet connection on the TiVo box will serve as the return path and interface with the SeaChange VoD system**. Cable VoD titles, meanwhile, are tied into the TiVo user interface (and search engine) using the DVR's Java-based HME (Home Media Engine), a component that TiVo already uses today for access to services such as YouTube Inc. and Flickr") (emphasis added).

achieved.[9] The tools and technology exist *today* to provide consumers with a real choice of navigation devices, but no market for retail navigation devices can develop without access to core cable programming services delivered by switched digital and future IP-transmission techniques. As TiVo has previously asserted, the Commission must either (1) reaffirm that all per-channel programming must be directly available to consumers using competitive set-top boxes that are technically capable of accessing such programs (and that operators must take steps necessary to support such access); or (2) initiate a rulemaking to determine how competitive retail devices will be provided with access to cable programming signals implemented with switched digital and future IP-transmission techniques.[10] Calls for NOIs to study "whether" the Commission should act are mere calls for delay. The Commission has an enormous record before it. At least with respect to providing retail devices with access to switched digital and future IP-delivered programming, action by rulemaking is ***required*** for the Commission to fulfill its obligations under Section 629.

The Commission Should Not Be Diverted From The Goals Of Section 629 And NBP #27 – To Bring Competition To The Device Market For *MVPD* Programming.

NCTA's Reply Comments acknowledge that Congress enacted both Section 624a and Section 629 to bring competition to device markets for *MVPD* services,[11] but otherwise suggest that the delivery of *Internet programming to televisions* should be sufficient.[12] If such were the case, NBP #27 would not have been necessary, as it is addressed to a very different, converse need: the delivery of *MVPD programming to home networked devices.*

NCTA similarly turns history and markets on their head. The Reply suggests that restricting the competitive availability of devices is a "life or death" issue for the cable industry, but that making fully capable networked devices available to consumers is only an "option" for device manufacturers. This is precisely backwards: In the 1990s, when Sections 624a and 629 were enacted, there was a thriving and intensely competitive market in retail VCRs that recorded cable programming. The capabilities and quality of these products increased every year as

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[9] *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices,* CS Docket No. 97-80, Report and Order ¶ 46 (rel. June 24, 1998). ("[W]e believe that Section 629 is intended to result in the widest possible variety of navigation devices being commercially available to the consumer.").

[10] *See* Petition for Reconsideration or Clarification of TiVo Inc., File Nos. EB-07-SE-351, EB-SE-352 (July 27, 2009); Reply to the Oppositions of Time Warner Cable Inc. and Cox Communications Inc. to Petition for Reconsideration or Clarification of TiVo Inc. (Aug. 21, 2009).

[11] *NBP Public Notice #27*, GN Docket Nos. 09-47, 09-51, 09-137, CS Docket No. 97-80, Reply Comments of the NCTA on NBP Public Notice #27 (Jan. 27, 2010).

[12] NCTA Reply Comments at 4-9.

their prices declined from the thousands to the hundreds to the tens of dollars.[13] This market has largely disappeared into a black hole of service-provider leased DVRs.

In the DVR world, TiVo is the only major competitive entrant left standing. This is not due to any falloff in the competitive abilities of manufacturers. Consumer electronics and information technology companies have produced inexpensive and sophisticated products that successfully managed the transition to broadcast digital television, inexpensive Internet gateways, and a plethora of laptop, imaging, game, and handheld products that also provide better value for less cost every year. The problem, rather, is that MVPDs have not provided adequate opportunities for retail device competition.

Whether TiVo and other competitive entrants can remain viable will depend on whether MVPD services can equitably support the use of competitive devices. TiVo has sought for a decade to provide consumers with a competitive retail option. In TiVo's experience, a commercially viable retail market needs three essential components: (1) access to all cable programming that a subscriber pays to receive (not merely a subset); (2) easy installation; and (3) the ability to offer a user experience that provides additional value to the consumers. Without these three things, a market for retail navigation devices simply cannot develop. Without service provider support of core MVPD functionality, the goals expressed by the Commission in NBP #27 cannot be achieved. Again, without a prompt and expeditiously-conducted rulemaking proceeding to update its rules and preserve subscriber access to the channels for which subscribers pay, it will be too late to achieve these goals. [14]

NCTA suggests that "televisions" can and should be the appropriate focus for enabling retail devices to work interactively with MVPD systems.[15] While TiVo believes that TVs should also be equitably supported on MVPD systems, a regime that picked fully integrated TVs as the only fully supported competitive entrant devices would make no more sense than one that picked desktop computers with fully integrated cable modems to be the only broadband-empowered devices. In addition to forestalling innovation from anyone *except* TV makers,

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[13] The first *Betamax* recorder came integrated with a television and cost around $2000. The first standalone unit cost $1300 – more than $4,400 in today's dollars. *See* http://www-personal.umich.edu/~jdlitman/papers/storyofsony.pdf. Today a new combination VCR and DVD player costs less than $100. http://www.bestbuy.com/site/JVC+-+Progressive-Scan+DVD+Player/2-Head+Hi-Fi+VCR/9714626.p?id=1218156772255&skuId=9714626.

[14] TiVo addressed its concerns with CableCARD installation in its response to the public notice, and the Commission is aware of the need for a regulatory rather than waiver approach to conditional access issues. The case for a "gateway" approach as an alternative to "fixing" the existing CableCARD regime was also laid out by a number of commenters, including CEA and Public Knowledge. Obviously, details of specific approaches can be refined through public comment and need not be presented to the Commission as a fully fleshed out technical proposals.

[15] NCTA Reply Comments at 4-9.

this would run explicitly counter to the objectives of the National Broadband Plan, as it would limit, rather than expand, the options available to consumers. It would also be inefficient, as consumers neither buy nor replace TVs as frequently as they do less expensive application platforms.

NCTA, in focusing on (1) Internet-carried video programming and (2) integrated televisions, is really suggesting that the markets for MVPD programming and for Internet-carried programs should remain segregated and isolated, with only MVPDs themselves able to link these markets via a leased set-top box with an integrated EPG.[16] But subscribers who want competitive alternatives should not be limited to their once-in-a-decade choice of a new television receiver. They should be free to choose TiVo, a leased MVPD box, or other competitive products to enjoy all of the television programming to which they subscribe, whether delivered by an MVPD or broadband. That is the entire point and rationale of NBP #27, and it is the best way, at this late date, for the Commission to comply with Section 629's mandate to *assure* that competitive devices can compete on MVPD systems.

Cable Content Can Be Accessed, Rendered, And Stored Securely On Home Networks.

The Commission has identified two interests of an MVPD in signal security – preventing "theft of service" as the product is introduced to the home and initially rendered, and addressing copyright-based protections as the product is introduced into the home network. In a September, 2000 Declaratory Ruling and Further Notice of Proposed Rulemaking, the Commission ruled that the latter is a subset of the former and may reasonably be addressed in competitive devices via licensing, and that any licensing abuses may be appealed to the Commission.[17] NCTA has presented no evidence that this system does not work or will not work satisfactorily in the context of access to a cable system via a gateway or any other retail device in the home.

The "TV Everywhere" service demonstrates that high value content can be delivered securely using standard Internet encryption and authentication techniques. The TV Everywhere service is designed to enable MVPD customers to enjoy their television programming on a variety of devices, including personal computers and IP connected devices. These personal computers and IP connected devices are *not* required to use tru2way middleware. There is no hardware

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[16] NCTA touts the cable industry's movement to offer Internet-carried programming via its set-top boxes – but fiercely opposes any approach by which a competitively-sourced product could offer both sorts of programming on a similarly integrated and interactive guide menu. *See, e.g.*, NCTA Reply Comments at 4-9, 24-26.

[17] *In the Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Further Notice of Proposed Rulemaking and Declaratory Ruling ¶ 28 (rel. Sept. 14, 2000).

authentication. There is no certification by CableLabs or anyone else, and no additional license terms imposed on device makers; and the service uses Internet-based security and open web protocols. The content delivered by TV Everywhere is *interactive* and on-demand, and relies upon the Internet for upstream signaling, to tell the server what content to stream to the IP connected device.

While not required by Section 629, the Commission has previous experience in dealing with the certification of technologies that balance the desire to protect content from unauthorized redistribution, ensure flexible use by authorized consumers, and encourage the development of new technologies. If deemed necessary, the Commission could further require the use of tools such as authentication, key exchange techniques, encryption, and even content localization techniques such as limits on the Time to Live ("TTL") and/or Round Trip Time ("RTT") fields in IP packets, which represents the number of routers through which an IP packet can pass before it is discarded, and the amount of time that an IP packet and associated responses can travel between devices, respectively.

The procedures developed in connection with the Broadcast Flag proceeding are a model of how the Commission can establish metrics against which a number of technologies, both standard and proprietary, can be certified for secure yet competitive use.[18] In the Broadcast Flag Order, the Commission adopted rules setting forth the relevant criteria and metrics. These included:

- Technological factors, including but not limited to security, authentication, upgradability, renewability, interoperability, and the ability of the technology to revoke compromised devices;
- Licensing terms, including compliance and robustness rules, change provisions, approval procedures for downstream transmission and recording methods, and the relevant license fees; and,
- Accommodation of consumers' use and enjoyment of content.

The establishment and soundness of these metrics was in fact one of the least controversial aspects of the Broadcast Flag proceeding. In the Broadcast Flag proceeding the Commission found that thirteen technologies satisfied criteria established to protect the content against indiscriminate redistribution. While the Commission may establish a different threshold for cable content protection, DTCP-IP, for example, has already been approved in CableLabs

[18] *In the Matter of Digital Broadcast Content Protection*, MB Docket No. 02-230, Report and Order and Further Notice of Proposed Rulemaking (rel. Nov. 4, 2003) ("Broadcast Flag Order"). These regulations were challenged and voided only on the basis of jurisdictional considerations that would be inapposite with respect to Section 629.

licenses for the purposes of protecting cable content in the home over IP-based networked devices.[19]

Examples Cited By NCTA Provide Precedents For Interactive Operation Of Competitive Retail Devices.

One of the key benefits to consumers from competitive retail devices is the consumer's ability to choose different, sometimes more advanced interfaces to select content from among a variety of sources. Consumer interfaces should not limit access to just cable channels, but also should provide easy selection of on-demand content, content the consumer has recorded, internet content, and more. Cable VOD can also be presented on a retail device with the same organizational structure and presentation as on operator-provided boxes. *This is what TiVo does with Netflix and other broadband VOD services today. There is no technological or policy reason why this capability should not be extended to content received via cable.*

For example, VOD programming can be presented in a separate area of a user interface. In this implementation, TiVo simply seeks the VOD guide metadata to enable subscribers to find or discover cable VOD titles when they use TiVo's search tools. If a subscriber uses TiVo's search functionality to look for "Modern Family" and "Modern Family" is available on Cable VOD and the consumer wishes to watch "Modern Family" on Cable VOD, then clicking the remote takes the subscriber to the Cable VOD user interface to watch the program. The metadata simply helps the subscriber find the program it wants to watch. Alternatively, a user could simply enter the Cable VOD area of the TiVo user interface and browse for "Modern Family" using the cable operator's organizational structure and presentation. Again, this is what TiVo does today with Netflix. Providing access to guide metadata is not akin to "unbundling" or "disaggregation" of MVPD systems and services and does not "dismantle" the economic underpinnings of the MVPD business model. It is analogous to how Internet search engines work.[20] If programming and ease of installation are comparable, the user experience -- particularly search and discovery functionality – is a key element that provides the additional value necessary for a consumer to purchase a product at retail.

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[19] For a detailed description of DTCP and other content protection technologies, *see In the Matter of Digital Output Protection Technology and Recording Method Certifications,* MB Dkt. No. 04-63, Order (rel. Aug. 12, 2004).

[20] If you search for "FCC" on google.com, then 23,500,000 hits are presented, including fcc.gov. You can get directly to the content on fcc.gov by clicking on the Federal Communications Commission home page. Alternatively, you can type fcc.gov in your browser. Access to content using such search tools do not present cognizable Constitutional, copyright, or trademark issues.

NCTA's Jurisdictional, Copyright, And Constitutional Objections Do Not Withstand Scrutiny.

Consumer choice of user interfaces has been impeded by assertions of exclusive rights to the data that populates the interface. In effect, MVPDs have asserted control over facts: what content is playing at a particular time on a particular channel; or, in the case of on-demand content, facts identifying what content is available. But in truth, *there is no intellectual property right that protects facts* – no more than a telephone company can assert protection over the names, addresses and numbers in a phone book, or a museum could claim over titles and artists of works in its collection. Neither exhibits the originality that would qualify it for any sort of copyright protection. Yet, the MVPDs persist in preventing the ability of consumers to access the facts that they already are paying for in the electronic program guide in a more convenient way of their choosing.

The NCTA has acknowledged that intellectual property rights have not posed an obstacle to cable operators providing metadata and channel mapping information so as to enable third party devices to learn what programming is being offered – even though the cable operators do not own the EPG metadata they use in their own guides.[21] Similarly, retail device makers are responsible for securing the intellectual property rights to receive and use guide data. For example, TiVo has arrangements with both Rovi and Tribune allowing it to receive and use EPG metadata on its retail products. Such license arrangements are available to any set top box (or personal computer) maker.[22] The Commission does not need to override any contracts, technologies or intellectual property rights in order for necessary data to be available to competitors.

Section IV of NCTA's Reply presents an assortment of alleged legal impediments to proposals that enable real choice in retail devices. As shown below, there is no jurisdictional or legal impediment to implementation of these proposals. NCTA mischaracterizes what is being requested by TiVo. They claim the Commission lacks jurisdiction to facilitate competitive retail devices, heedless that the same arguments NCTA made to the Commission in the Plug and Play proceeding some six years ago support the Commission's jurisdiction today. They attempt to confuse protection of copyrighted programming with facts identifying the programming, which have no copyright protection. And they attempt to erect Constitutional barriers to choice under a flawed analysis. Indeed, many of the cases NCTA cites cut against its arguments.

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[21] As NCTA noted, guide data can be provided to retail boxes under the Tru2way MOU without running afoul of intellectual property rights. NCTA Reply at 21 n.28. Clearly, operators have the ability to provide meta data to retail boxes that have secured the relevant intellectual property rights.

[22] Naturally, consistent with the FCC's patent policy, the Commission can be expected to consider complaints that guide data is not being licensed on reasonable and non-discriminatory terms, or is unavailable due to outstanding patent claims. *Cf. Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service,* 6 FCC Rcd 7024, 7034 (1991).

To begin with, NCTA proceeds from a false premise. No proposal of which TiVo is aware (*i.e.*, access to "interactive" programming and guide metadata by Plug and Play devices or various gateway concepts) would require an MVPD to unbundle or disaggregate content being delivered to the consumer; or to permit someone to rebrand MVPD service as its own. The proposals being asserted merely seek to reference factual information from the EPG metadata that describes available programming. They do not disaggregate or unbundle the programming services, any more than any EPG does. The proposals merely break the unnecessary tie between the programming itself and data describing the programming – much as the Commission's implementation of Section 629 broke the bond between security and services.

No approach would prevent MVPDs from offering their own boxes. But that should not mean that the reverse should be mandated, *i.e.,* that MVPDs' cable EPGs must be the only option. All that is at issue is whether a competitive EPG can present data to the consumer in a more consumer-friendly and useful interface that enables consumers to get easy access to all available content, from all sources. As noted above, this is what TiVo already does for on-demand offerings from Netflix and for broadband content.

Second, the Commission clearly has jurisdiction to facilitate such access. Part and parcel of competitive navigation devices is the interface and the data that enables that navigation to occur. Indeed, NCTA argued persuasively in March, 2003, in one of the dockets referenced by NBP #27, that such jurisdiction *does* exist. *Then*, NCTA asserted:

> These rules are well within the FCC's jurisdiction, vested in it by various sections of the Communications Act, including (1) the "compatibility". labeling and commercial availability requirements of Section 624A, (2) the MVPD "navigation device" requirements of Section 629, and (3) the digital transition requirements of Section 336(b)(4) and (5).[23]

In April, 2003 Reply Comments, NCTA elaborated that the FCC had demonstrated jurisdiction in analogous circumstances. For example:

- 47 C.F.R. § 79.1 imposes closed captioning requirements on MVPDs;
- 47 C.F.R. § 76.225 requires cable operators to observe commercial limits on children's television programming;
- 47 C.F.R. § 79.2 requires MVPDs to make programming providing emergency information accessible to persons with disabilities;

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[23] *In the Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Dkt. No. 97-80, PP Dkt. No. 00-67, Comments of the NCTA at 17 (Mar. 28, 2003).

- Under Section 629, it is not a violation of the separation requirement of its navigation devices rules to include some measure of copy protection within a host device, as part of a cable operator's grant of conditional access to its services;
- Section 624A imposes labeling rules for Digital Television Receivers to identify to consumers cable programming capabilities;
- Section 624A specifies technical requirements with which a television receiver. must comply in order to be sold as "cable compatible" or "cable ready."[24]

The same analogies apply here. The EPG Data is being sought to promote ease of navigation by consumers, using products competitively available at retail. Contrary to NCTA's contentions, granting access to metadata delivered to a consumer in an EPG does not impose requirements regarding "the provision or content of cable services." Neither does access to guide metadata turn a cable system into a common carrier. All that is being sought is access to data already being paid for by the subscriber from the cable service. Consequently, approaches requiring access to guide metadata are not contrary to either Section 621(c) or Section 624(f)(1).

Third, NCTA's insistence concerning proper licensing of metadata is simply a non-issue. As NCTA concedes and TiVo notes above, licenses to the data are available, and TiVo has obtained those necessary licenses.[25] While NCTA suggests that such licenses only should be acquired under its tru2way agreements, it is unnecessary to do so; and, in any event, none of CableLabs's private bilateral agreements can limit the FCC's jurisdiction to act. NCTA cannot use metadata licensing as leverage to compel all companies to accept the tru2way agreement, rather than simpler and less restrictive approaches.

Fourth, NCTA's constitutional arguments raise no impediments to approaches requiring access to guide metadata. Seeking to invoke First Amendment concerns, NCTA asserts, "[t]he Supreme Court has long recognized that a cable operator's choice and arrangement of programming and services is protected editorial expression under the First Amendment."[26] But their citation to *Turner Broadcasting v. FCC* is inapposite. The Court there observed that cable programmers and operators exercised rights of speech "through original programming and by exercising editorial discretion over which stations of programs to include in its

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[24] *In the Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Dkt. No. 97-80, PP Dkt. No. 00-67, Reply Comments of the NCTA at 48-51 (Apr. 28, 2003).

[25] Indeed, the licensors appear more than willing to make such license rights available to many CE manufacturers in the near term. *See* Consumer Electronics Daily, *Rovi Sees First TotalGuide Agreement with CE Manufacturers in March*, Vol. 10 No. 30 at 2 (Feb. 16, 2010).

[26] NCTA Reply Comments at 31.

repertoire... ."[27] But TiVo does not seek access either to programming or any element involving editorial choices as to what stations to include on its channel line-up. The metadata merely identifies the choices that are being offered to the consumer, without interfering with the choices themselves. The Court did not recognize any free speech rights in the "arrangement" of programming or services on particular channels. Nor can one imagine how a First Amendment interest in which channels are made available on a cable system can be stretched to assert an interest in *how* those channels are located by the consumer. Yet that is all that constitutes the EPG metadata sought by TiVo.

Access to guide metadata also poses no risks of a violation of the "Takings" clause under the Fifth Amendment. As is clear from the case cited by NCTA, no "taking" would occur. In *Ruckelshaus v. Monsanto*, 467 U. S. 986 (1984), the Court found that EPA regulations that permitted use of data concerning one pesticide in the evaluation of subsequent competitive products effectuated a "taking" only as to data submitted before the regulation took effect. The Court found that Monsanto had no reasonable investment-backed expectation of compensation in data submitted after the regulation took effect, and so no taking occurred with respect to the prospective application of the regulation.[28] Thus, a Commission regulation with only prospective effect (*i.e.*, affecting only EPG data delivered after a future date) would be consistent with the Fifth Amendment and would not constitute a "taking" under *Ruckelshaus*.[29]

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[27] 512 U.S. 622, 636 (1994) (*"Turner I"*). Although not germane to access to guide metadata, NCTA fails to mention that the Supreme Court held in that case that an MVPD's "editorial discretion" is subject only to intermediate scrutiny under the First Amendment, and can be and is limited by countervailing public interests. Under "intermediate scrutiny," the government must show that the law is necessary to achieve a substantial, or important governmental interest, and that the law is narrowly tailored to that interest. *See Turner Broadcasting System, Inc. v. F.C.C.*, 520 U.S. 180, 189 (1997) (*"Turner II"*), *citing United States v. O'Brien*, 391 U.S. 367, 377 (1968). In *Turner II*, the appeal from the remand of *Turner I*, for example, the Court upheld over the cable industry's objection the constitutionality of the "must carry" rule, finding it an incidental and content neutral burden on speech. The purpose of the "must carry" rule was "to protect broadcast television from what Congress determined to be unfair competition by cable systems." *Turner Broadcasting*, 512 U.S. at 652. A regulation granting access to underlying EPG data similarly would further the Congressional determination to assure competition in consumer navigation devices, in a content-neutral way. Thus, even if First Amendment concerns were pertinent here, the paramount public interests undergirding Sections 624A and 629 would satisfy intermediate scrutiny.

[28] Moreover, the data submitted before the regulation took effect was only a "taking" because the government action was found to destroy all of the economic value of the trade secret. *Id.* Having to share guide metadata with retail devices doesn't destroy its value, much less the value of the cable service.

[29] The traditional test for regulatory takings emerged in *Penn Central Transp. Co. v. New York,* 438 U.S. 104 (1978). *Penn Central* involved a claim against the designation of the Penn Central Station as a state historic landmark, thereby prohibiting its owners from developing the space above the building. The Court utilized a three-prong, ad-hoc analysis that considered the following: (1) the character of the governmental action; (2) the economic impact of the action; and (3) the extent to which such action interferes with the claimant's reasonable investment backed expectations. Based on the three-part analysis, Penn Station could not prevail on its regulatory

Importantly, the Fifth Amendment does not prohibit "takings" for a public purpose.[30] It requires only that any such taking be justly compensated. *See, Ruckelshaus, supra; Kelo v. City of New London*, 545 U.S. 469 (2005). Yet this issue does not even arise. Subscribers already do pay cable systems for the right of access to the EPG and metadata. All that is being asked is that access to data for which the consumer has paid be ported to an interface format that is not limited to the MVPD's set top box and is available to other competing devices.[31] For all these reasons, even if a regulation permitting consumers to access that EPG data in a separate interface could be deemed a "taking," the regulation would not interfere with any reasonable investment-backed expectations of the MVPDs, and would not be precluded under the Takings clause.

Fifth, NCTA confuses the protection of content itself with protection of factual information about the content. As noted above, a product that received protected content would perpetuate protection over the programming in accordance with the licenses and compliance rules requirements imposed by the protection technologies themselves and existing laws such as the Digital Millennium Copyright Act.

Neither is there any merit to NCTA's assertion of cognizable copyright issues by providing metadata. Copyright does not protect facts. "That there can be no valid copyright in facts is universally understood."[32] To the extent a cable company creates "original graphic, text, video and other content for use in their program guides and interfaces," TiVo does not seek such original content – only access to basic factual information contained in the EPG.

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takings claim. The character of the governmental action, the landmark designation, was not a direct physical invasion; Penn Station still had the ability to use the airspace above the terminal and gained transfer development rights; and the regulation did not interfere with the use of the station as a station so Penn Station retained its investment-backed expectation of interests. *Id.* at 136-38. Doing business in highly regulated fields raises the bar for cable operators seeking to make viable Fifth Amendment claims. *See, Monsanto,* 467 U.S. at 1011; *Connolly v. Pension Benefit Guaranty Corp.*, 475 U.S. 211, 223-24 (1986) (emphasizing that federal law could disregard existing contract rights in highly regulated fields without violating either the Due Process or Takings Clause).

[30] Any regulation promulgated by the Commission in furtherance of the competitive availability requirements of Section 629 would undoubtedly further public, not private, purposes.

[31] To the extent that MVPDs believe that additional compensation is appropriate, they are not prevented from adjusting their prices provided they comply with applicable laws including antitrust.

[32] *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 344 (1991); 17 U.S.C. § 102(b). *See* Copyright Office FAQ, *What Does Copyright Protect, http://www.copyright.gov/help/faq/faq-protect.html* EPG data also can be viewed as essential to the function and operation of the method of selecting television channels, and such functions and methods of operation also are excluded from copyright protection. 17 U.S.C. 102(b); *see Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807 (1st Cir. 1995) (determining that commands and hierarchical menu command structure for selection of spreadsheet operations is not protectable by copyright). "If specific words are essential to operating something, then they are part of a 'method of operation' and, as such, are unprotectable." *Id.*, 49 F.3d at 816.

Again, the main case cited by NCTA proves TiVo's point. *Feist* involved a claim of protection to a white pages telephone directory organized by geographic region and name, and including the address and telephone number of each resident. Despite the publisher's substantial investment in compiling tens of thousands of listings, the Court held the directory could not be protected by copyright because the compilation of that basic factual information lacked the constitutionally-required element of originality.[33] Similarly, MVPDs cannot protect the underlying facts in an EPG. Like the data in a white pages phone book, the EPG contains basic facts as to time, channel, program name, and, in the case of on-demand content, availability. These facts themselves are not protectable by copyright, regardless of whether these facts could be ordered or arranged in an original way.[34]

Sixth, NCTA's "misappropriation" theory holds no water here. There is no federal law of misappropriation. Obviously, if access to EPG data were permitted by a Commission regulation, it could not be considered a misappropriation under any state law. But even in the absence of regulation, the narrow tort of misappropriation would not cover access to facts in an EPG. In *Nat'l Basketball Ass'n v. Motorola, Inc.*,[35] (cited by NCTA Reply at 33 n.55), the Second Circuit held that any "misappropriation" of factual information is restricted for a limited time, as a "hot news" exception; and that absent that additional temporal element, the misappropriation theory was preempted by federal copyright law precluding protection over

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[33] *Id.*, 499 U.S. at 345.

[34] In that connection, NCTA misplaces its reliance on *Nat'l Ass'n of Broadcasters v. Copyright Royalty Tribunal*, 675 F.2d 367 (D.C. Cir. 1982). Although that court found that the selection of programming for a broadcast day may be protected by copyright, it is because that selection and ordering of programming contained some element of authorship. The same cannot be said of the facts that merely identify the programs, time, and channel. TiVo is not seeking to repackage the programming itself or to offer the same programming on a competing channel. It merely seeks access to unprotectable facts in the EPG metadata.

Similarly, NCTA is incorrect in asserting that a competitor has no right to make copies of a copyrighted work (here, a compilation) for the purpose of obtaining access to certain underlying, nonprotectable facts. *See, e.g., Sony Computer Entertainment v. Connectix Corp.*, 203 F.3d 596 (9th Cir. 2000) (fair use to copy and disassemble game console BIOS in order to analyze noncopyrightable functions for competing virtual system interoperable with console-specific games); *Sega Enterprises Ltd. v. Accolade, Inc.* 977 F.2d 1510 (9th Cir. 1993) (fair use for game software competitor to make a copy of copyrighted game console code and to copy noncopyrightable security elements so as to facilitate interoperability). "To the extent that a work is functional or factual, it may be copied." *Id.*, 977 F.2d at 1524. To hold otherwise would effectively extend copyright protection in the arrangement of facts to the facts themselves, contrary to the express provisions of the Copyright Act.

[35] 105 F.3d 841 (2d Cir. 1997).

facts.[36] Sports scores, descriptions of plays, and player and team statistics transmitted via sports pagers were held not to be misappropriated. In reaching that conclusion, the court articulated the elements of state law misappropriation – including two crucial elements ignored by NCTA in its Reply; namely, that: "(ii) the value of the information is highly time-sensitive" and "(v) the ability of other parties to free-ride on the efforts of the plaintiff would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened." *Id.*, 105 F.3d 852.[37] Thus, no misappropriation theory could apply here. Television schedules, typically set long in advance, do not qualify as "hot news." Even late schedule changes would certainly exceed the gap between the final buzzer and reporting the final score, which was held permissible in *NBA v. Motorola.* In any event, the ability of consumers to gain access to EPG data through another interface will not reduce any incentive by cable operators to create an EPG. MVPDs will continue to be paid by consumers for access to the EPG. And, competition from companies such as TiVo may spur innovation by MVPDs to create a better EPGs than what consumers have been forced to settle for to date.

Finally, NCTA's Lanham act theory is similarly meritless. Trademark law protects words, phrases, or symbols capable of distinguishing the goods and services of one entity from those of another;[38] it cannot protect factual information in an EPG, since facts cannot be branded or owned. There also is no issue of "passing off" TiVo's guide as that of an MVPD, or vice versa. It will be clear to consumers who they pay to acquire cable services and whose interface they choose – the MVPD's or a competitor's. Both guides will be available to consumers, who can choose which better meets their needs. TiVo has been providing its own guide and user interface for over ten years and consumers have not been confused as to its source. Moreover, gaining access to EPG metadata does not involve stripping of any MVPD trademarks visible to the consumer. Rather, TiVo wants access to the underlying data *without* any trademarks of the MVPD. In this regard, NCTA misuses the trademark term of art "dilution" which refers to the use of a famous mark in a way that dilutes its value – like using "Coke" to refer generically to cola soft drinks or "TiVo" for all DVRs. But that is the opposite of what TiVo seeks. TiVo does not want to be forced to use any of the MVPD's branding just to provide factual information concerning programming available to the consumer.

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[36] *See also Financial Information, Inc. v. Moody's Investors Service, Inc.*, 808 F.2d 204 (2nd Cir. 1986) (information in Moody's "Financial Daily Card Service" held not copyrightable, and defendant's use of those facts was not a misappropriation under N.Y. law).

[37] As the Second Circuit explained, the misappropriation theory in the other case cited by NCTA, *International News Service v. Associated Press*, 248 U.S. 215 (1918) "is not about ethics; it is about the protection of property rights in time-sensitive information so that the information will be made available to the public by profit-seeking entrepreneurs." *NBA v. Motorola*, 105 F.3d at 853.

[38] *See, e.g.*, "Basic Facts About Trademarks," http://www.uspto.gov/trademarks/basics/Basic_Facts_Trademarks.jsp

Please contact me with any questions regarding this matter.

Sincerely,

Matthew Zinn
Senior Vice President, General Counsel, Secretary & Chief Privacy Officer